

IN THE CLAIMS:

1 1. – 5. (CANCELLED)

1 6. (Previously Presented) A method of claiming ownership of a disk by a network device
2 in a network storage system comprising the steps of:
3 writing ownership information to a predetermined area of the disk; and
4 setting a small computer system interface persistent reservation tag to a state of
5 network device ownership.

1 7. (ORIGINAL) The method of claim 6 wherein the ownership information further com-
2 prises a serial number of a network device.

1 8. (ORIGINAL) The method of claim 6, wherein the network device comprises a file
2 server.

1 9. (Previously Presented) A network storage system comprising:
2 a plurality of network devices;
3 one or more switches, each network device connected to at least one of the one or
4 more switch; and
5 a plurality of disks having a first ownership attribute written to a predetermined
6 area of the disk and a second ownership attribute in the form of a small computer system

7 interface persistent reservation tag, each disk connected to at least one of the plurality of
8 switches.

1 10. (CANCELLED)

1 11. (Previously Presented) The network storage system of claim 9, wherein the small
2 computer system interface persistent reservation tag is a small computer system interface
3 level 3 persistent reservation tag.

1 12. (Previously Presented) The networked storage system of claim 9, wherein the small
2 computer system interface 3 persistent reservation tag is set such that only the network
3 device may write to the disk.

1 13. (Previously Presented) The network storage system of claim 9, wherein the first
2 ownership attribute further comprises a serial number of the network device that owns
3 that particular disk.

1 14. (Previously Presented) The network storage system of claim 9, wherein each of the
2 plurality of file servers can read data from each of the plurality of disks.

1 15. (Previously Presented) The network storage system of claim 9, wherein only a net-
2 work device that owns one of the plurality of disks can write data to the one disk.

1 16. (ORIGINAL) The network storage system of claim 9, wherein the network devices
2 comprise file servers.

1 17. (Previously Presented) A network storage system comprising:
2 one or more switches;
3 a plurality of disks; and
4 means for writing ownership information to a predetermined area of a disk; and
5 means for setting a small computer system interface level 3 persistent reservation
6 tag of a disk.

1 18. (CANCELLED)

1 19. (ORIGINAL) The network storage system of claim 17, wherein the network devices
2 comprise file servers.

1 20. (Previously Presented) A network storage system comprising:
2 one or more switches interconnected to form a switching fabric;
3 a plurality of disks, each of the disks connected to at least one of the switches,
4 each disk storing a first ownership attribute to a predetermined area of a disk and
5 each disk associated with a second ownership attribute in the form of a small
6 computer system interface persistent reservation; and
7 one or more network devices, interconnected with the switching fabric, each of
8 the network devices being adapted to own a predetermined set of disks of the plurality of
9 disks through use of the first and second ownership attributes.

1 21. (CANCELLED)

1 22. (CANCELLED)

1 23. (Previously Presented) The network storage system of claim 20, wherein the first
2 ownership attribute further comprises a serial number of one of the one or more network
3 devices.

1 24. (Previously Presented) The network storage system of claim 20, wherein the small
2 computer system interface persistent reservation is a small computer system interface
3 level 3 persistent reservation.

1 25. (ORIGINAL) The network storage system of claim 20, wherein each of the network
2 devices further comprises a disk ownership table, the disk ownership table containing
3 ownership data for each of the disks.

1 26. (ORIGINAL) The network storage system of claim 25, wherein the ownership table
2 further comprises a world wide name for each of the disks, the world wide name being
3 used for identification of each of the disks.

1 27. (Previously Presented) A computer-readable medium, including program instructions
2 executing on network device, for performing the steps of:

3 writing ownership information to a predetermined area of a disk; and
4 setting a small computer system interface persistent reservation tag to a state of
5 network device ownership.

1 28. (PREVIOUSLY PRESENTED) A method for a network device to manage owner-
2 ship of one or more storage devices in a network storage system, comprising the steps of:

3 reading ownership information from a predetermined area of each storage device;
4 in response to reading the ownership information, creating an ownership table that
5 identifies the one or more storage devices owned by the network device;

6 reading a small computer system interface (SCSI) level 3 persistent reservation
7 tag from each storage device;

8 comparing the SCSI level 3 persistent reservation tag to the ownership informa-
9 tion of the same storage device and, if there is not a match, changing the SCSI level 3
10 persistent reservation tag to match the ownership information; and

11 configuring the one or more storage devices identified in the ownership table into
12 at least one volume for use by the network device.

1 29. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:

2 setting ownership information at the predetermined area of each storage device.

1 30. (PREVIOUSLY PRESENTED) The method of claim 28 wherein the step of con-
2 figuring further comprises:

3 organizing the one or more storage devices into at least one Redundant Array of
4 Independent Disks (RAID) group.

1 31. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:
2 wherein the predetermined area of the one or more storage devices is sector zero
3 of the one or more storage devices.

1 32. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:
2 wherein the ownership information is a serial number of the network device that
3 owns that particular storage device.

1 33. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:
2 wherein the ownership table includes a world wide name for each of the storage
3 devices, the world wide name being used to identify each of the storage devices.

1 34. (PREVIOUSLY PRESENTED) A network device for managing ownership of one
2 or more storage devices in a network storage system, comprising the steps of:
3 means for reading ownership information from a predetermined area of each stor-
4 age device;
5 in response to reading the ownership information, means for creating an owner-
6 ship table that identifies the one or more storage devices owned by the network device;
7 means for reading a small computer system interface (SCSI) level 3 persistent res-
8 ervation tag from each storage device;
9 means for comparing the SCSI level 3 persistent reservation tag to the ownership
10 information of the same storage device and, if there is not a match, changing the SCSI
11 level 3 persistent reservation tag to match the ownership information; and

12 means for configuring the one or more storage devices identified in the ownership
13 table into at least one volume for use by the network device.

1 35. (PREVIOUSLY PRESENTED) A computer readable medium containing executable
2 program instructions for managing ownership of one or more storage devices in a net-
3 work storage system, the executable program instructions comprising program instruc-
4 tions for:

5 reading ownership information from a predetermined area of each storage device;
6 in response to reading the ownership information, creating an ownership table that
7 identifies the one or more storage devices owned by the network device;

8 reading a small computer system interface (SCSI) level 3 persistent reservation
9 tag from each storage device;

10 comparing the SCSI level 3 persistent reservation tag to the ownership informa-
11 tion of the same storage device and, if there is not a match, changing the SCSI level 3
12 persistent reservation tag to match the ownership information; and

13 configuring the one or more storage devices identified in the ownership table into
14 at least one volume for use by the network device.

1 36. (PREVIOUSLY PRESENTED) A network storage system, comprising:

2 one or more storage devices, each storage device having a predetermined area for
3 storing ownership information and each storage device having a small computer system
4 interface (SCSI) level 3 persistent reservation tag;

5 at least one network device having an ownership table constructed based upon
6 the ownership information from each storage device;

7 the at least one network device having an ownership layer for comparing the SCSI
8 level 3 persistent reservation tag to the ownership information of the same storage device

9 and, if there is not a match, changing the SCSI level 3 persistent reservation tag to match
10 the ownership information; and

1 the at least one network device having a disk storage layer for configuring the one
2 or more storage devices identified in the ownership table into at least one volume for use
3 by the network device.

1 37. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further
2 comprising:

3 the ownership layer adapted to set ownership information at the predetermined
4 area of each storage device.

1 38. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further
2 comprising:

3 the disk storage layer organizing the one or more storage devices into at least one
4 Redundant Array of Independent Disks (RAID) group.

1 39. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further
2 comprising:

3 wherein the predetermined area of the one or more storage devices is sector zero
4 of the one or more storage devices.

1 40. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further
2 comprising:

3 wherein the ownership information is a serial number of the network device that
4 owns that particular storage device.

1 41. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further
2 comprising:

3 wherein the ownership table includes a world wide name for each of the storage
4 devices, the world wide name being used to identify each of the storage devices.

1 42. (Previously Presented) The method of claim 6 wherein the small computer system
2 interface persistent reservation tag and the ownership information at the predetermined
3 area of the disk indicate ownership by the same network device.

1 43. (Previously Presented) The method of claim 6 wherein the small computer system
2 interface persistent reservation tag is a small computer system interface level 3 persistent
3 reservation tag.

1 44. (Previously Presented) A method for a network device to manage ownership of one
2 or more storage devices in a network storage system, comprising the steps of:
3 reading ownership information from a predetermined area of each storage device;
4 accessing a small computer system interface (SCSI) persistent reservation tag as-
5 sociate with each storage device;
6 comparing the SCSI persistent reservation tag to the ownership information of the
7 same storage device and, if there is not a match, changing the SCSI persistent reservation
tag to match the ownership information; and
configuring the one or more storage devices for use by the network device.

1 45. (Previously Presented) The method of claim 44 wherein the small computer system
2 interface (SCSI) persistent reservation tag is a small computer system interface level 3
3 (SCSI-3) persistent reservation tag.

1 46. (Previously Presented) The method of claim 44 further comprising:
1 in response to reading the ownership information, creating an ownership table on
2 the network device that identifies the one or more storage devices owned by the network
3 device; and
4 using the ownership table to configure the one or more storage devices into at
5 least one volume.

1 47. (Previously Presented) The method of claim 44 further comprising:
2 setting ownership information at the predetermined area of each storage device.

1 48. (Previously Presented) The method of claim 44 further comprising:
2 wherein the predetermined area of the one or more storage devices is sector zero
3 of the one or more storage devices.

1 49. (Previously Presented) A network storage system, comprising:
2 means for reading ownership information from a predetermined area of each stor-
3 age device;
4 means for accessing a small computer system interface (SCSI) persistent reserva-
5 tion tag associate with each storage device;
6 means for comparing the SCSI persistent reservation tag to the ownership infor-
7 mation of the same storage device and, if there is not a match, changing the SCSI persis-
8 tent reservation tag to match the ownership information; and

9 means for configuring the one or more storage devices for use by the network de-
10 vice.

1 50. (Previously Presented) A computer readable medium containing executable program
2 instructions for manage ownership of one or more storage devices, the executable pro-
3 gram instructions comprising program instructions for:

4 reading ownership information from a predetermined area of each storage device;
5 accessing a small computer system interface (SCSI) persistent reservation tag as-
6 sociate with each storage device;

7 comparing the SCSI persistent reservation tag to the ownership information of the
8 same storage device and, if there is not a match, changing the SCSI persistent reservation
9 tag to match the ownership information; and

10 configuring the one or more storage devices for use by the network device.